

# PATENT COOPERATION TREATY RECEIVED

AUG 10 2004

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

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MINNICH & MCKEE, LLP

**PCT**

13 APR 2005

WRITTEN OPINION  
(PCT Rule 66)

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To:

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Date of mailing  
(day/month/year) 09.08.2004

Applicant's or agent's file reference  
ESNZ 2 00028 *PCT*

**REPLY DUE** within 3 month(s)  
from the above date of mailing

International application No.  
PCT/US 03/33240

International filing date (day/month/year)  
22.10.2003

Priority date (day/month/year)  
23.10.2002

International Patent Classification (IPC) or both national classification and IPC  
A61G7/057

Applicant  
TCAM TECHNOLOGIES, INC.

1. This written opinion is the **first** drawn up by this International Preliminary Examining Authority.
2. This opinion contains indications relating to the following items:
  - I ☒ Basis of the opinion
  - II ☐ Priority
  - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV ☐ Lack of unity of invention
  - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI ☐ Certain documents cited
  - VII ☐ Certain defects in the international application
  - VIII ☐ Certain observations on the international application
3. The applicant is hereby **invited to reply** to this opinion.
 

**When?** See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also:** For an additional opportunity to submit amendments, see Rule 66.4.  
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.  
For an informal communication with the examiner, see Rule 66.6.

**If no reply is filed,** the international preliminary examination report will be established on the basis of this opinion.
4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 23.02.2005

Name and mailing address of the international preliminary examining authority:

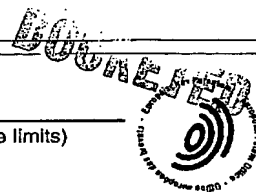


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**I. Basis of the opinion**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed"*):

**Description, Pages**

1-12 as originally filed

**Claims, Numbers**

1-26 as originally filed

**Drawings, Sheets**

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:
- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
4. The amendments have resulted in the cancellation of:
- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:
5. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).
6. Additional observations, if necessary:

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**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Claims	1,2,17
Inventive step (IS)	Claims	
Industrial applicability (IA)	Claims	

**2. Citations and explanations**

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/US 03/33240

1. Reference is made to the following document:  
D1: US 2001/032365 A1 (SRAMEK ROGER) 25 October 2001 (2001-10-25)
2. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1 and 17 is not new in the sense of Article 33(2) PCT.
  - 2.1 Indeed, the document D1 discloses (the references in parentheses applying to this document):
    - A mat with an array of individual bladders (§ 31); a means (§ 24, 30) responsive to body heat for adjusting contact pressure individually in the bladders (indeed, it is obvious from physical laws that a deformation or heating of the "means responsive to body heat" induces a deformation or heating of the bladders, changing their volume or temperature and accordingly their internal pressure which is then adjusted to that new configuration). (cf. claim 1)
    - A method of supporting a subject while reducing a potential for pressure ulcers, by supporting the subject (§ 13) on a plurality of air bladders (§ 31); pressurizing each of the air bladders; sensing a temperature (§ 24, 30) at a potential contact point on each bladder; and, responsive to the sensed temperature, adjusting a pressure in each bladder. (cf. claim 17)
3. Dependent claim 2 does not contain any features which, in combination with the features of any claim to which it refers, meet the requirements of the PCT in respect of novelty, the reasons being as follows:
  - it is obvious from physical laws that a deformation or heating of the "means responsive to body heat" described in D1 (§ 24, 30) induces a deformation or heating of the air-filled bladders (§ 31), changing their volume or temperature and accordingly their internal pressure which is then adjusted to that new configuration. (cf. claim 2)
4. The combination of the features of dependent claim 3 is neither known from, nor rendered obvious by, the available prior art. The reasons are as follows:  
D1 fails to disclose a mat wherein the heat responsive means includes a heat sensor and vent structure mounted on an exposed surface of each bladder. It would appear that such a heat sensor and vent structure provides precise adjustment of the pressure in the bladder by making air escape from within the cell (depressurizing it) through the vent that opens only under warming. In D1, only a modification of parameters such as volume and temperature due to compression and body heat would change the inside pressure of the bladders, but no vent or

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valve is used because there's no intention to in/outlet air.

- 5 The combination of the features of dependent claim 18 with the subject-matter of independent claim 17 is neither known from, nor rendered obvious by, the available prior art.

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